

# POLYARYLENE COPOLYMER AND PROTON-CONDUCTIVE FILM

**Patent number:** JP2001329053  
**Publication date:** 2001-11-27  
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**Classification:**  
**- international:** C08G61/12; H01B1/12; H01G9/028; H01M8/02;  
H01M6/18; H01M10/40  
**- european:**  
**Application number:** JP20000153047 20000524  
**Priority number(s):** JP20000153047 20000524

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## Abstract of JP2001329053

**PROBLEM TO BE SOLVED:** To provide a polyarylene copolymer capable of giving a sulfonated polymer capable of forming a film exhibiting a high proton-conductivity over a wide temperature range, and having excellent mechanical strengths, suppressed swellability in hot water and excellent durability by controlling an amount of a sulfonic acid introduced not to deteriorate the mechanical properties.

**SOLUTION:** Provided are a polyarylene copolymer comprising 40-3 mol% (A) units of an aromatic compound having electron-attracting groups and etheric bonds in the main chain and 60-97 mol% [(A)+(B)=100 mol%] (B) units of an aromatic compound having no electron-attracting groups in the main chain and a protonically conductive film comprising a sulfonated polymer prepared by sulfonating the copolymer.

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